

**COMBINED DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor of the subject matter which is described and claimed in

U.S. Patent No. 5,978,125,

Title: COMPACT PROGRAMMABLE PHOTONIC VARIABLE DELAY DEVICES,

Issue Date: November 2, 1999,

which was granted from a U.S. Application No. 08/564,920 filed November 30, 1995, and for which a reissue patent is sought on the invention entitled COMPACT PROGRAMMABLE PHOTONIC VARIABLE DELAY DEVICES, the specification of which:

☒ [X] is attached hereto and is amended by a Preliminary Amendment attached hereto.

☐ [] was filed on \_\_\_\_\_ as Application Serial No. \_\_\_\_\_ and was amended on \_\_\_\_\_.

☐ [] was described and claimed in PCT International Application No. \_\_\_\_\_ filed on \_\_\_\_\_ and as amended under PCT Article 19 on \_\_\_\_\_.

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I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information I know to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56.

I verily believe the original patent to be wholly or partly inoperative, for the reasons of the patentee claiming more or less than he had the right to claim in the patent. At least one error which is relied upon to support this reissue application is described below.

More specifically, the following errors are believed to cause the patentee claiming less than he had right to claim in the patent:

1. Original Claims 1-30 in the patent No. 5,978,125 do not specifically claim a combination which is now claimed.

2. Original Claims 1-30 in the patent No. 5,978,125 use the language "birefringent crystal" or "crystal" to describe limitations supported by the birefringent element 40 in FIGS. 5A-8, and the birefringent slab 92 in FIGS. 9 and 10A. However, upon review, it was realized that this language was narrower than

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what was really warranted by the original specification. Notably, the originally-filed specification discloses "birefringent materials" for elements 40 and 92. More specifically, the description for "birefringent materials" is in Column 9, lines 37-38(emphasis added):

Table I listed the birefringence of potential ***birefringent materials*** for fabricating the proposed delay lines.

The language "material" may be broader than the language "crystal."

Hence, through error without deceptive intent, I claimed less than what I, in retrospect, had right to claim. The scope of each of Claims 1-30 is less than what the patentee is entitled. Such error in each of original Claims 1-30 is specifically identified in bold italic font as follows:

**Claim 1:**

Column 11, line 35, "birefringent crystal".

**Claim 5:**

Column 12, lines 9-10, "a first bireftingent[sic] ***crystal*** segment;"

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Column 12, lines 12-13, "said first birefringent **crystal** segment;"

Column 12, line 21, "birefringent **crystal** segments;"

Column 12, line 23, "any two adjacent **crystal** segments;"

Column 12, lines 26-27, "each birefringent **crystal** segment;"

Column 12, lines 28-29, "all said birefringent **crystal** segments."

Claim 6:

Column 12, line 32, "each said birefringent **crystal** segment."

Claim 7:

Column 12, line 39, "a first birefringent **crystal** segment;"  
and

Column 12, line 40-41, "said first birefringent **crystal** segment."

Claim 8:

Column 12, line 46, "said first birefringent **crystal** segment."

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Claim 9:

Column 12, line 48, "a second birefringent **crystal** segment;"

Column 12, line 50, "the birefringent **crystal** segment;" and

Column 12, line 52, "the second birefringent **crystal** segment."

Claim 10:

Column 12, lines 55-56, "a plurality of birefringent **crystal** segments;"

Claim 11:

Column 12, lines 60-61, "different birefringent **crystal** segments."

Claim 12:

Column 12, line 63, "different birefringent **crystal** segments."

Claim 13:

Column 12, lines 66-67, "the first birefringent **crystal** segment;"

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Column 13, lines 2-3, "the first birefringent **crystal** segment;"

Column 13, line 5, "the second birefringent **crystal** segment;" and

Column 13, lines 7-8, "the second birefringent **crystal**."

Claim 15:

Column 13, line 23, "a first birefringent **crystal** segment;" and

Column 13, line 25, "first birefringent crystal segment."

Claim 16:

Column 13, lines 31-32, "said first birefringent **crystal** segment."

Claim 17:

Column 13, line 34, "a second birefringent **crystal** segment;"

Column 13, line 36, "said second birefringent **crystal** segment;"

Column 13, line 38, "**crystal** segment;" and

Column 13, line 40, "birefringent **crystal** segment."

Claim 18:

Column 13, line 44, "birefringent **crystal** segments."

Claim 19:

FOOTNOTES

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Column 13, line 49, "**crystal** segments."

Claim 20:

Column 13, line 51, "different birefringent **crystal** segments."

Claim 21:

Column 13, line 62, "the second birefringent **crystal** segment."

Claim 22:

Column 14, line 9, "the second birefringent **crystal** segment;" and

Column 14, line 12, "second birefringent **crystal** segment."

Claim 23:

Column 14, lines 15-16, "said first birefringent **crystal** segment."

Claim 25:

Column 14, line 31, "birefringent **crystal** segment;"

Column 14, line 34, "birefringent **crystal** segment;" and

Column 14, line 38, "birefringent **crystal**."

Claim 30:

Column 14, line 64, "a birefringent **crystal**;"

Column 14, line 67, "birefringent **crystal**;"

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Column 15, line 1, "the birefringent **crystal;**" and

Column 16, line 3, "the birefringent **crystal.**"

3. The original Claims 14 recites the word "electro-optic crystals" in Column 14, line 12 as one implementation of "said first polarization rotator." Similarly, the original Claim 26 recites the word "electro-optic crystal based polarization rotator" in Column 14, line 45 as one implementation of "said first and said second polarization rotators."

It has been noticed in retrospect that the words "crystal" and "crystals" used in this specific manner may be overly limiting based on the language of the originally-filed specification. More specifically, "an electro-optic element" is described in Column 7, lines 14-15. Hence, due to the language of "crystal" used in this specific manner, the scope of each of original Claims 14 and 26 may be less than what the patentee is entitled to.

In view of the above, the claims as proposed to be added in this reissue application may cover a new combination and hence this reissue application is a broadening reissue. I certify that all errors which are being corrected in this reissue application up to the time of filing this declaration arose without any deceptive intention on my part.



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As a named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

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San Diego, California 92122

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

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SCOTT C. HARRIS

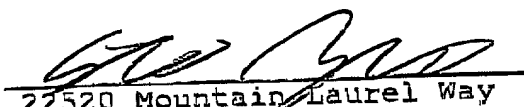
Attorney's Docket No.: 12361-014002

**COMBINED DECLARATION AND POWER OF ATTORNEY**  
Page 10 of 10 Pages

Full Name of  
Inventor:

X. Steve Yao

Inventor's  
Signature:



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1006545-4001  
TOTAL 345007

PTO/SB/56 (08-00)  
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### STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: X. Steve Yao / General Photonics Corporation

Application No./Patent No.: 5,978,125 Filed/Issue Date: Nov. 2, 1999

Entitled: COMPACT PROGRAMMABLE PHOTONIC VARIABLE DELAY DEVICES

General Photonics Corporation, a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by, percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

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☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

10/30/01  
Date

X. Steve Yao

Typed or printed name

[Signature]  
Signature

President & Chief Technical Officer

Title

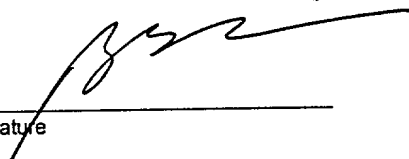
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Commissioner for Patents: Please record the attached original document(s) or copy(ies).

1. Name of conveying party(ies): <b>X. Steve Yao</b> Additional name(s) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		2. Name and address of receiving party(ies): <b>GENERAL PHOTONICS CORPORATION</b> 13766 Arapahoe Place Chino, California 91710  Additional names/addresses attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other:  Execution Date: 5/10/01			
4. Application number(s) or patent number(s): If this document is being filed with a new application, the execution date of the application is: A. Patent Application No(s):  B. Patent No(s): <b>5,978,125</b> Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Name/address of party to whom correspondence concerning document should be mailed:  <b>BING AI</b> Fish & Richardson P.C. 4350 La Jolla Village Drive, Suite 500 San Diego, CA 92122		6. Total number of applications/patents involved: 1  7. Total fee (37 CFR §3.41): \$40 <input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Authorized to charge Deposit Account.  8. Deposit Account No.: 06-1050 Please apply any additional charges, or any credits, to our Deposit Account No. 06-1050.	
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Bing Ai , Reg. No. 43,312 Name of Person Signing		Signature:  Date: <u>May 22, 2001</u>	
Total number of pages including coversheet, attachments and document: 2			

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### CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner of Patents, Washington, D.C. 20231.

May 22, 2001 Date of Deposit	 Signature	Nancy Grant Typed Name of Person Signing Certificate
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ASSIGNMENT

For valuable consideration, I, X. STEVE YAO of Diamond Bar, California, hereby assign to: General Photonics Corporation, a California corporation having a place of business at: 13766 Arapahoe Place, Chino, California 91710; and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by me, entitled COMPACT PROGRAMMABLE PHOTONIC VARIABLE DELAY DEVICES, filed November 30, 1995, and assigned U.S. Serial Number 08/564,920, issued November 2, 1999, and assigned U.S. Patent Number 5,978,125; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and I authorize the Assignee to apply in all countries in my name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and I agree for me and my respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

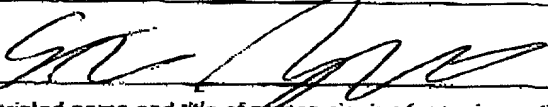
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<b>REISSUE APPLICATION: CONSENT OF ASSIGNEE; STATEMENT OF NON-ASSIGNMENT</b>		<b>Docket Number (Optional)</b> 12361-014001 & 014002
This is part of the application for a reissue patent based on the original patent identified below.		
Name of Patentee(s) X. Steve Yao		
Patent Number 5,978,125	Date Patent Issued November 2, 1999	
Title of Invention COMPACT PROGRAMMABLE PHOTONIC VARIABLE DELAY DEVICE		
<p>1. <input checked="" type="checkbox"/> Filed herein is a statement under 37 CFR 3.73(b). (Form PTO/SB/99)</p> <p>2. <input type="checkbox"/> Ownership of the patent is in the inventor(s), and no assignment of the patent is in effect.</p>		
<p>One of boxes 1 or 2 above must be checked. If multiple assignees, complete this form for each assignee. If box 2 is checked, skip the next entry and go directly to "Name of Assignee".</p> <p>The written consent of all assignees and inventors owning an undivided interest in the original patent is included in this application for reissue.</p>		
<p>The assignee(s) owning an undivided interest in said original patent is/are <u>General Photonics Corp.</u> and the assignee(s) consents to the accompanying application for reissue.</p>		
Name of assignee/inventor (if not assigned) General Photonics Corporation		
Signature 	Date 10/30/01	
<p>Typed or printed name and title of person signing for assignee (if assigned)</p> <p>X. Steve Yao President and Chief Technical Officer</p>		

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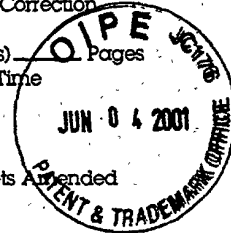
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